REMARKS

Claims 1-13 and 24-26 were previously canceled. Claims 30-31 have been added. Claim 14 has been amended. With entry of this amendment, claims 14-23 and 27-31 will be pending. Support for new claims 30-31 can be found, *inter alia*, on page 9 of the description.

Claims 14-23 and 27-29 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claim 14 has been amended. The Applicant notes that the scope of claim 14 has not been narrowed in any way. Withdrawal of the indefiniteness rejection is respectfully requested.

Claims 14-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,132,691 issued to Ejk and U.S. Patent No. 4,060,508 issued to Sugahara.

Ejk clearly differentiates between zinc oxide and/or zinc hydroxide on the one hand and zinc salts on the other hand. According to Ejk's invention both groups of zinc compounds are disclosed in completely different contexts:

1) Zinc oxide and/or zinc hydroxide must not be used at all since they adversely affect the performance of Ejk's disclosed lubricant compositions; and

2) Zinc salts may be applied as optional additives in carboxylate-based heat stabilizers.

Concerning zinc oxide and/or zinc hydroxide Ejk discloses at column 2, lines 7+ a lubricant composition obtained from combining a polar lubricant with an oxide or hydroxide of tin, antimony or an element from group IIa, IIIa or IVb of the periodic table. Only these oxides and hydroxides are to be applied according to Ejk's invention. Therefore, Applicant respectfully points out that this list does not comprise oxides or hydroxides of zinc or lead, since zinc and lead do belong to group IIb and IVa of the periodic table.

At column 4, lines 3+, Ejk discloses in more detail the preferred oxides and hydroxides: calcium oxide, calcium hydroxide, barium hydroxide, strontium hydroxide, zirconium hydroxide, aluminum hydroxide and antimony trioxide. In addition, at column 4 line 8, Ejk explicitly refers to two more oxides, namely, zinc oxide and lead oxide, as explicitly not being suitable because they adversely affect the heat stability of vinyl chloride polymers. One of ordinary skill in the art

would regard this passage as a warning to refrain from using zinc oxide or lead oxide.

At column 9 lines 25+, Ejk discloses the meaning of "adversely affect" in more detail. Referring to example 5, which demonstrates the improvement of heat stability obtained using representative metal oxides and hydroxides within the scope of the invention in vinyl chloride polymer formulations, Ejk discloses that the use of oxides or hydroxides of zinc or lead induces early discoloration of vinyl chloride polymers. Being confronted with this characteristic negative consequence explicitly disclosed by Ejk, one of skill in the art would not consider applying zinc oxide in a stabilizer formulation for vinyl chloride polymers.

Concerning zinc salts at column 2 lines 64-66, Ejk's lubricant composition is said to be compatible with virtually all of the known heat stabilizers for vinyl chloride polymers. In this context, Ejk explicitly states distinct classes of heat stabilizers. According to column 2 lines 66+, a first major class is composed of organotin compounds. Different from that, referring to column 3 lines 39-43, other classes of heat stabilizers are composed of salts of carboxylic acids based on alkaline earth metals, particularly, calcium and barium. These salts can be used alone or optionally in combination with salts of the same carboxylic acids and elements from group IIb of the periodic table, particularly, zinc and cadmium.

The disclosure of Ejk does not contain any hint that zinc salts of these classes of stabilizers can be combined with organotin compounds of the first mentioned class of heat stabilizers. Furthermore, concerning heat stabilizers, the disclosure of Ejk does not contain any statement that leads the skilled person to a combine two or more heat stabilizers for a single improved vinyl chloride polymer composition.

Additionally, the skilled person will take the teaching of Ejk with regard to the adverse effects of Zn into account. When confronted with the option of using Zn-salts, the skilled person would refrain from using such salts since, according to Ejk, the heat stability may be adversely affected. Therefore, the Applicant respectfully submits the disclosure of Ejk does not include a teaching of a tin stabilizer with an incorporated carboxylic acid zinc salt, especially not at column 3 lines 35-43, as the Examiner asserts on page 4 of the Office action.

Consequently, Ejk's disclosure neither teaches the combination of a tin stabilizer with a carboxylic acid zinc salt, nor does it render the use of a zinc oxide in a stabilizer combination obvious. Even more, since the negative effect of zinc oxide and zinc hydroxide is explicitly

stated, the disclosure of Ejk leads the skilled person away from applying any zinc compound in stabilizer formulations.

Nevertheless, the Examiner has combined Ejk with Sugahara to reject the claims as being obvious. The Examiner refers to the extensive discussion at column 11 lines 3+, where Sugahara states that the incorporation of zinc compounds into silicate based stabilizer compositions may further reduce the initial discoloration of chlorine containing polymers. Applicant, however, is of the opinion that the use of zinc compounds in stabilizer compositions is not suggested at all, especially not when considering the examples given by Sugahara.

In example 3, Sugahara compares stabilizer compositions based on different types of silicates in view of their influence on thermal stability, blackening time and chlorine-catching activity. Among those silicates, a calcium-zinc composite silicate is investigated. As can be seen from table 4, the calcium-zinc composite silicate performs badly. Only magnesium silicate demonstrates worse characteristics concerning thermal stability, blackening time and chlorine-catching activity.

One of skill in the art, having in mind Ejk's disclosure and being confronted with this result presented by Sugahara, would not choose a zinc compound in combination with a calcium compound, which is an essential ingredient according to the present invention, in a stabilizer composition halogen containing polymers.

In example 9, Sugahara directly compares various stabilizer compositions containing different organic additives in view of their influence on blackening time and chlorine-catching activity. Among these additives, as can be seen from table 10, zinc stearate performed by far the worst. Again, confronted with this result, a person skilled in the art would not choose a zinc compound for a stabilizer composition.

None of Sugahara's remaining examples proves an outstanding suitability of zinc compounds in silicate based stabilizers which would lead a person skilled in the art to apply them in a stabilizer composition according to the present invention.

In conclusion, Ejk, taken alone, does not give any hint to combine a zinc salt with an organotin stabilizer. Moreover, it explicitly teaches away from the use of zinc oxide or zinc hydroxide in a stabilizer composition. Sugahara does not give any hint which would suggest the use of a zinc compound in silicate based stabilizer compositions. Sugahara teaches away from the use of Zn salts since his experimental data identifies Zn salts as the ingredient with the least

positive effect. Therefore, the combination of both disclosures does not lead a person skilled in the art to apply a zinc compound for a stabilizer combination according the present invention.

Consequently, claims 14-23 and 27-29 are allowable. Reconsideration and allowance of claims 14-23 and 27-29 are respectfully requested.

New claim 30 depends from allowable claim 14, and therefore is allowable. In addition, claim 30 contains additional patentable subject matter not taught or suggested by the prior art. Particularly, claim 30 recites the method of claim 14, wherein the zinc compound is selected from the group consisting of a zinc salt having from 10 to 18 carbon atoms, zinc oxide and zinc hydroxide.

Consequently, claim 30 is allowable. Consideration and allowance of claim 31 is respectfully requested.

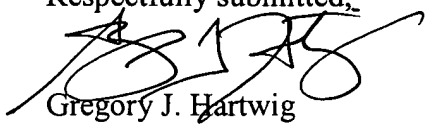
New claim 31 depends from allowable claim 14, and therefore is allowable. In addition, claim 31 contains additional patentable subject matter not taught or suggested by the prior art. Particularly, claim 31 recites the method of claim 14, wherein the zinc compound is selected from the group consisting of a zinc salt of a saturated aliphatic carboxylic acid having from 10 to 18 carbon atoms, zinc oxide and zinc hydroxide.

Consequently, claim 31 is allowable. Consideration and allowance of claim 31 is respectfully requested.

CONCLUSION

In view of the foregoing, reconsideration and allowance of claims 14-23 and 27-29 and consideration and allowance of claims 30-31 are respectfully requested. Should any issues remain that preclude the allowance of the application, the Examiner is strongly encouraged to contact the undersigned by telephone.

Respectfully submitted,



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